Mathematics and CS Seminar

Correlation functions for the Schur process with free boundaries

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Host: Laszlo Erdös

Using free fermionic techniques we write down the n-point pfaffian correlation functions for the Schur process with one and two free boundaries. In the one free boundary case, we rederive asymptotic results first obtained by Baik--Rains on symmetry classes of last passage percolation problems, as well as analyze new models for old structures: symmetric plane partitions and plane over--partitions (symmetric pyramid partitions). The two free boundaries case is similar to the periodic Schur process of Borodin and we hope to exploit these similarities in a follow-up. We connect the results to the KPZ universality class, the Tracy--Widom distributions and kernels conjecturally interpolating between Airy and Gumbel/Gaussian. Based on joint work in progress with Jeremie Bouttier, Peter Nejjar and Mirjana Vuletic.

Thursday, June 8, 2017 04:00pm - 06:00pm

Seminar room Big Ground floor / Office Bldg West (I21.EG.101)

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